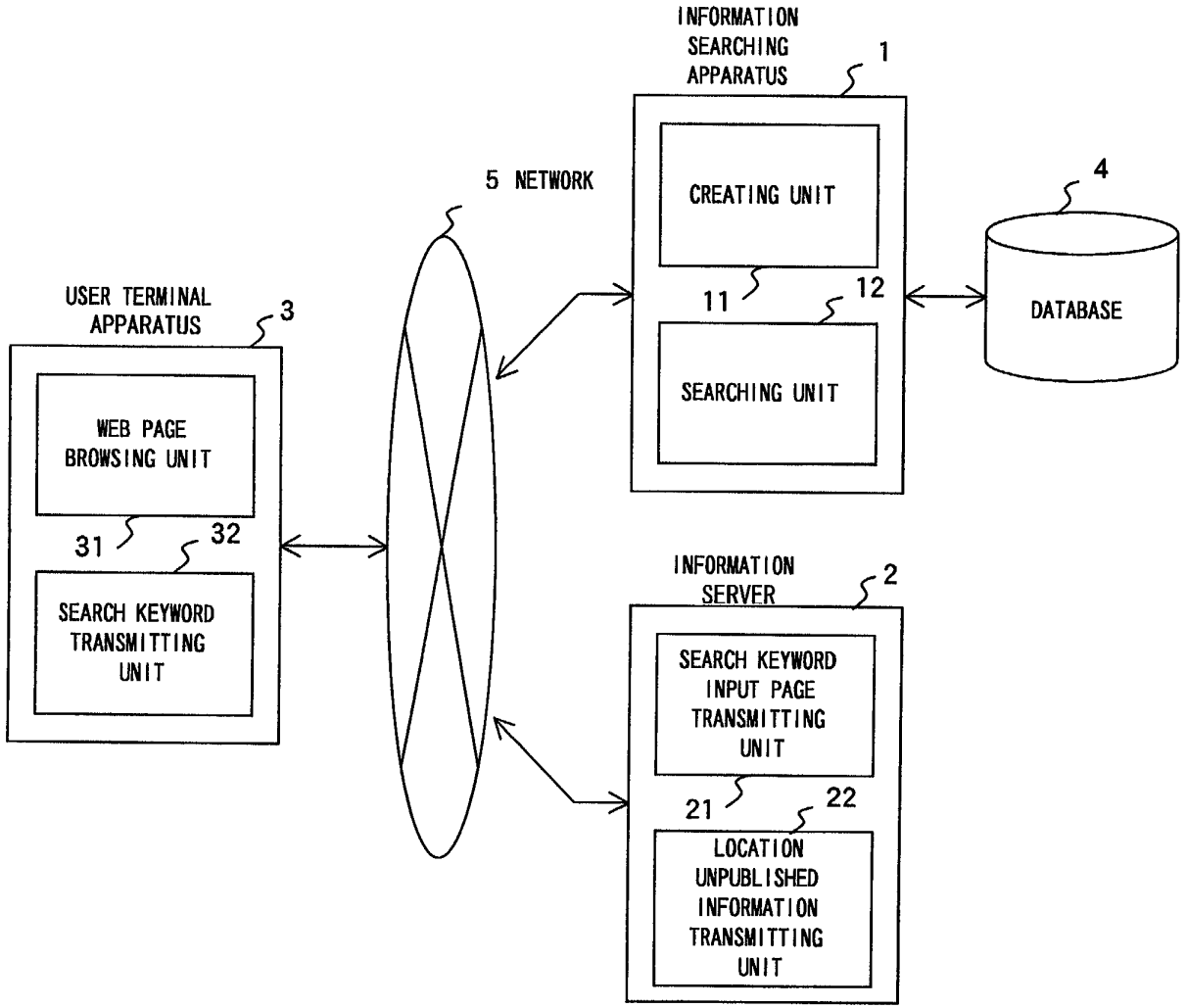
INFORMATION SEARCHING APPARATUS
1
CREATING UNIT
11
12
SEARCHING UNIT
4
DATABASE
5 NETWORK
USER TERMINAL APPARATUS
3
WEB PAGE BROWSING UNIT
31
32
SEARCH KEYWORD TRANSMITTING UNIT
INFORMATION SERVER
2
SEARCH KEYWORD INPUT PAGE TRANSMITTING UNIT
21
22
LOCATION UNPUBLISHED INFORMATION TRANSMITTING UNIT

FIG. 1

PATENT PUBLICATION

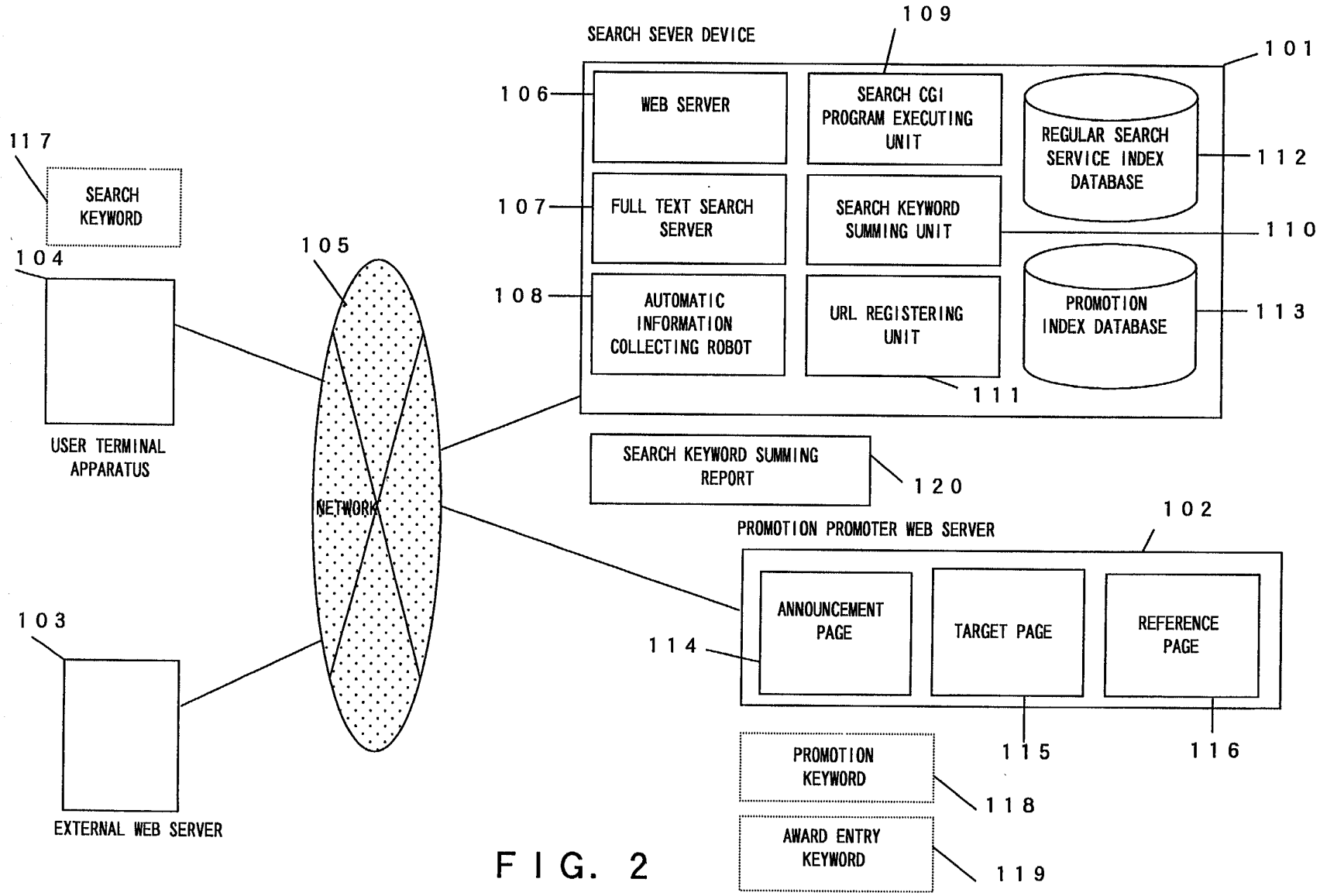

FIG. 2

PATENT PUBLICATION

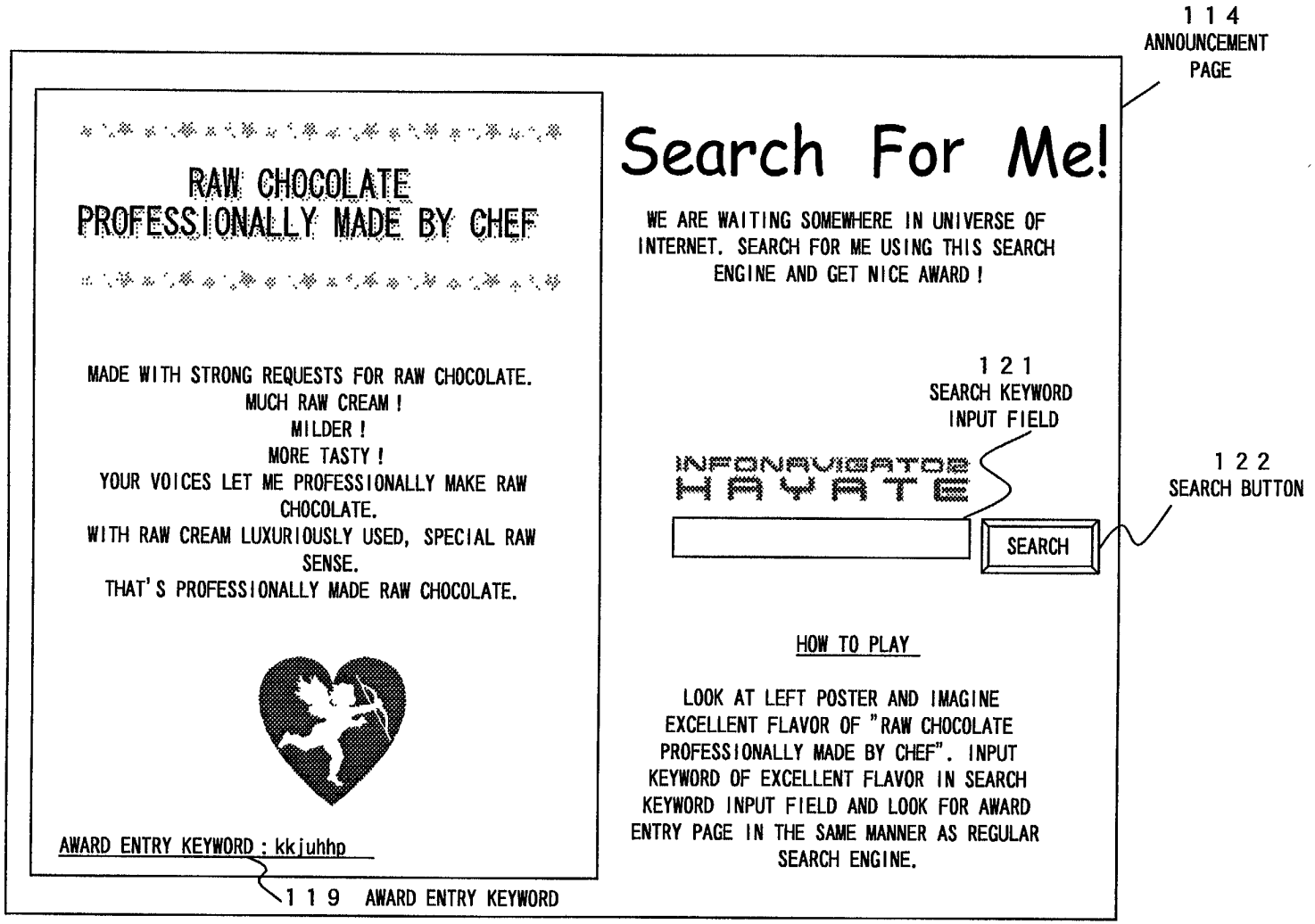

FIG. 3

PATENT TRADEMARK

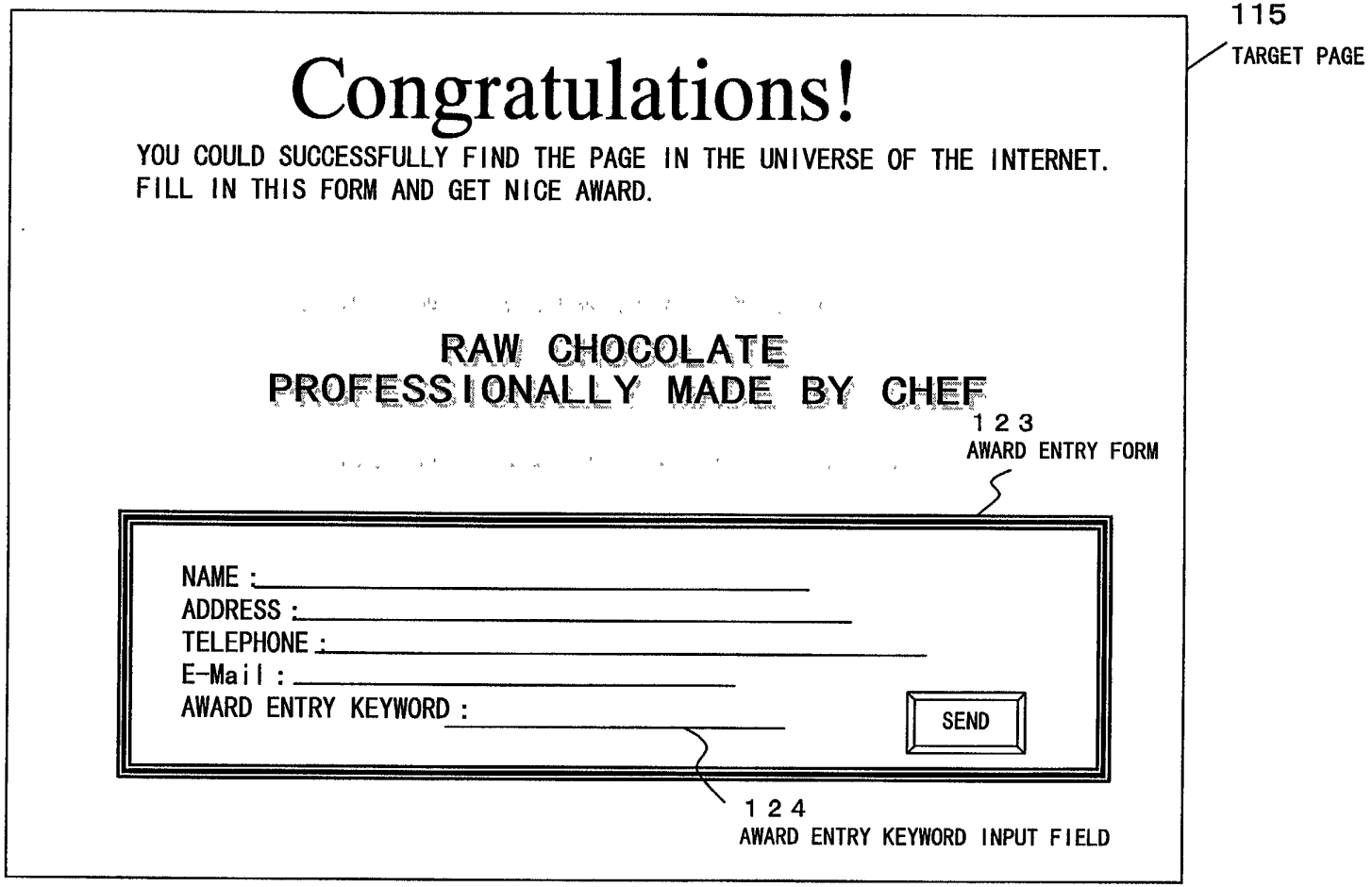

FIG. 4

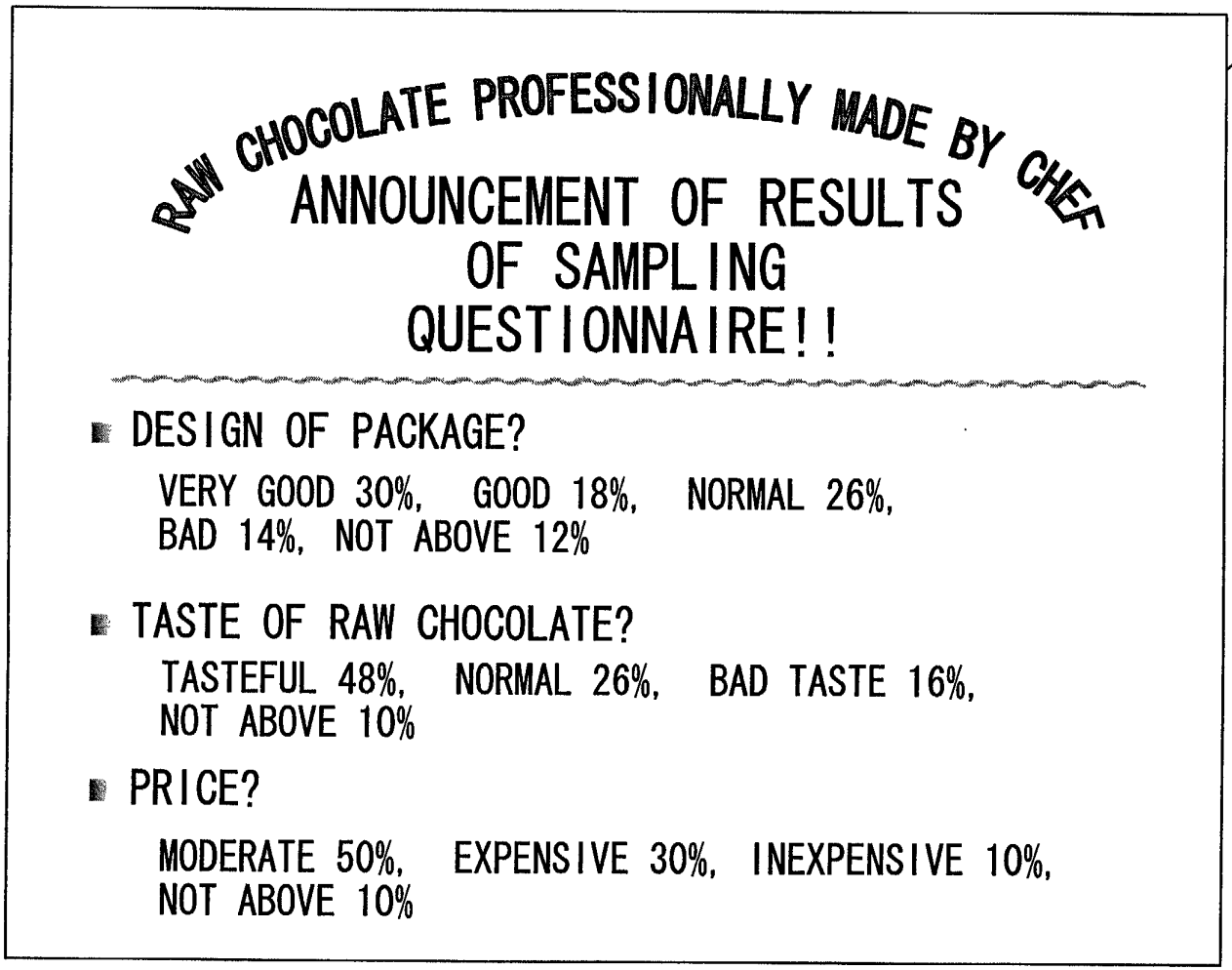

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FIG. 5

FOREIGN PUBLICATION

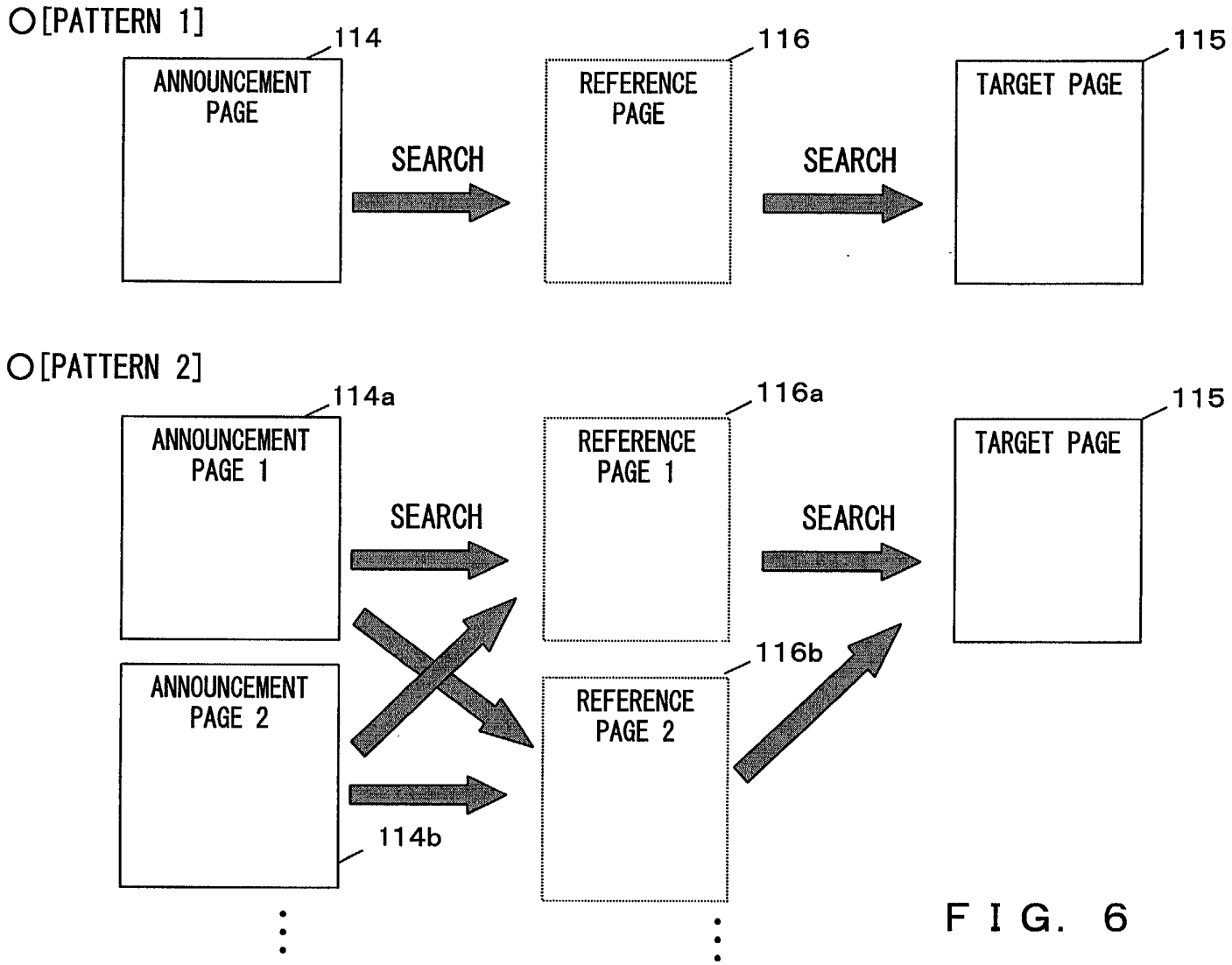

FIG. 6

PATENT APPLICATION

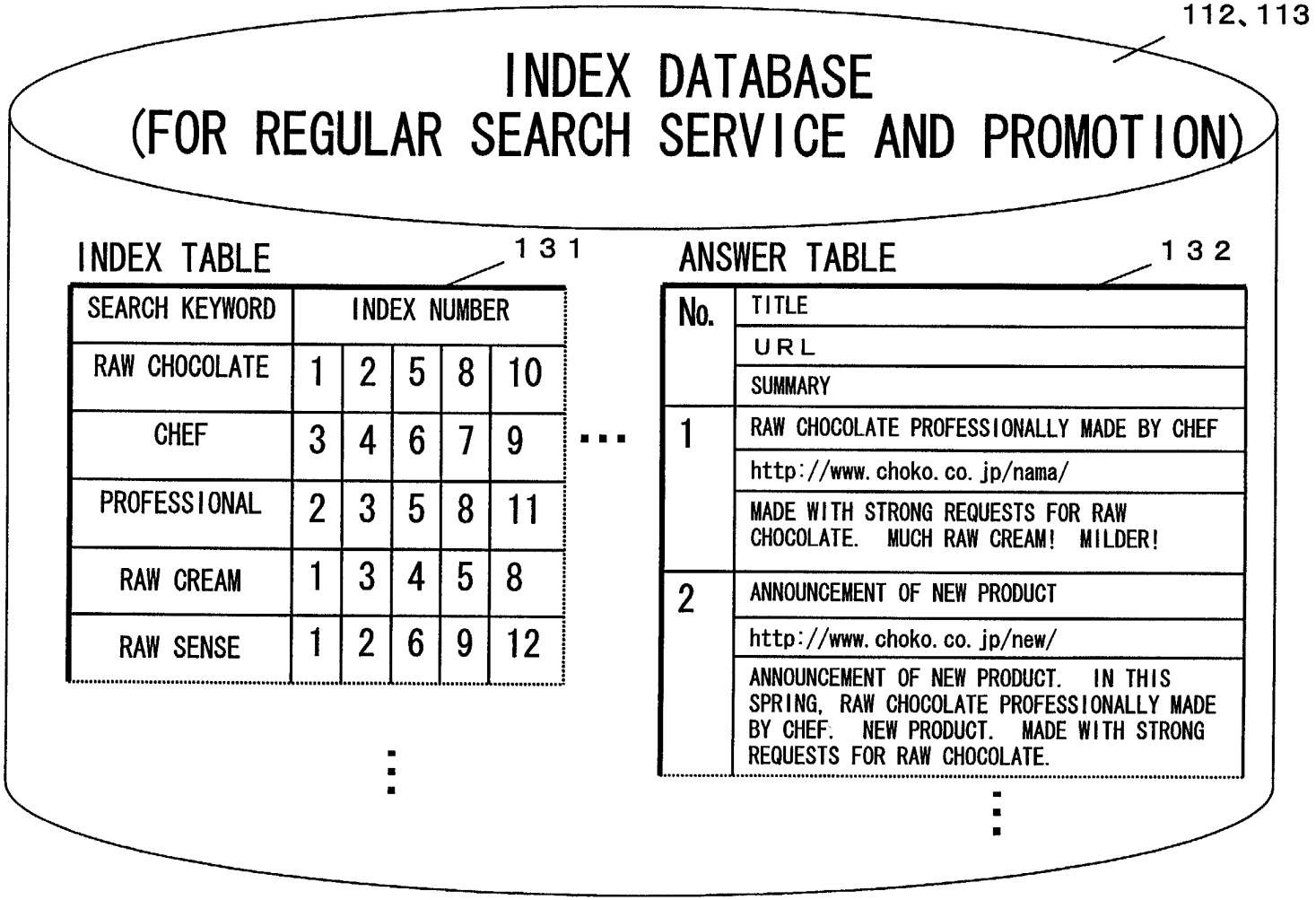

FIG. 7

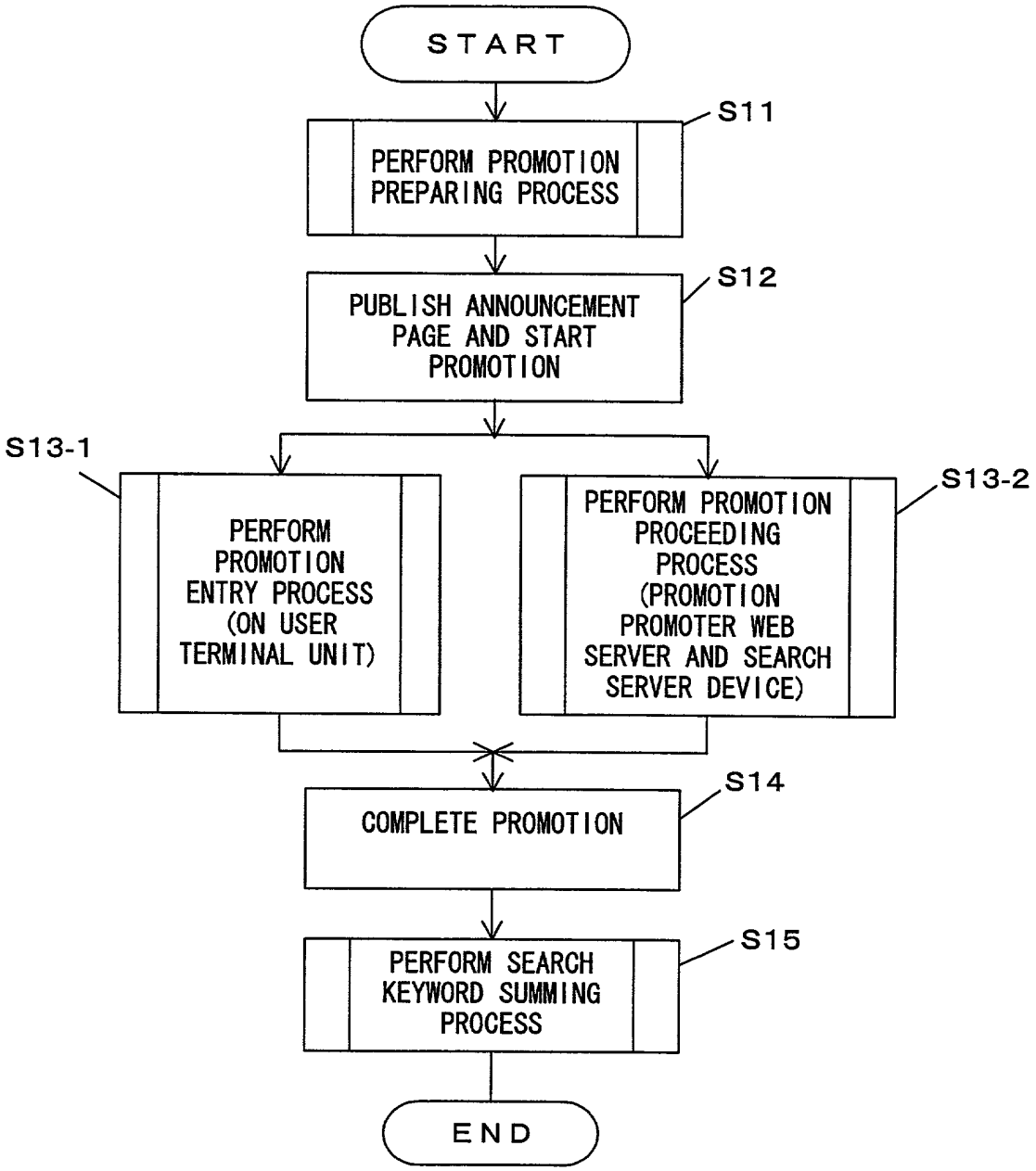
START
S11
PERFORM PROMOTION PREPARING PROCESS
S12
PUBLISH ANNOUNCEMENT PAGE AND START PROMOTION
S13-1
PERFORM PROMOTION ENTRY PROCESS (ON USER TERMINAL UNIT)
S13-2
PERFORM PROMOTION PROCEEDING PROCESS (PROMOTION PROMOTER WEB SERVER AND SEARCH SERVER DEVICE)
S14
COMPLETE PROMOTION
S15
PERFORM SEARCH KEYWORD SUMMING PROCESS
END

FIG. 8

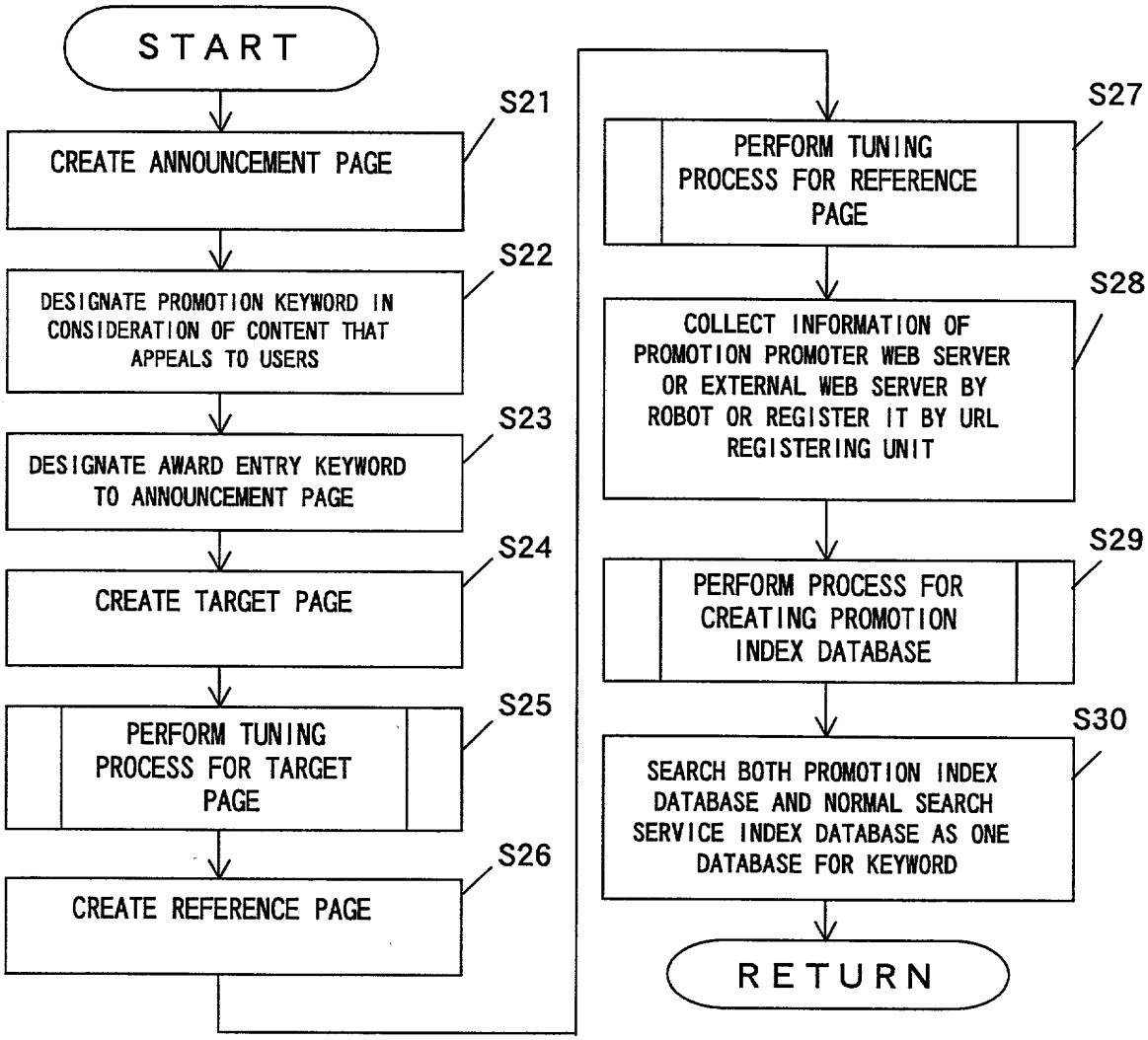
START
S21
CREATE ANNOUNCEMENT PAGE
S22
DESIGNATE PROMOTION KEYWORD IN CONSIDERATION OF CONTENT THAT APPEALS TO USERS
S23
DESIGNATE AWARD ENTRY KEYWORD TO ANNOUNCEMENT PAGE
S24
CREATE TARGET PAGE
S25
PERFORM TUNING PROCESS FOR TARGET PAGE
S26
CREATE REFERENCE PAGE
S27
PERFORM TUNING PROCESS FOR REFERENCE PAGE
S28
COLLECT INFORMATION OF PROMOTION PROMOTER WEB SERVER OR EXTERNAL WEB SERVER BY ROBOT OR REGISTER IT BY URL REGISTERING UNIT
S29
PERFORM PROCESS FOR CREATING PROMOTION INDEX DATABASE
S30
SEARCH BOTH PROMOTION INDEX DATABASE AND NORMAL SEARCH SERVICE INDEX DATABASE AS ONE DATABASE FOR KEYWORD
RETURN

FIG. 9

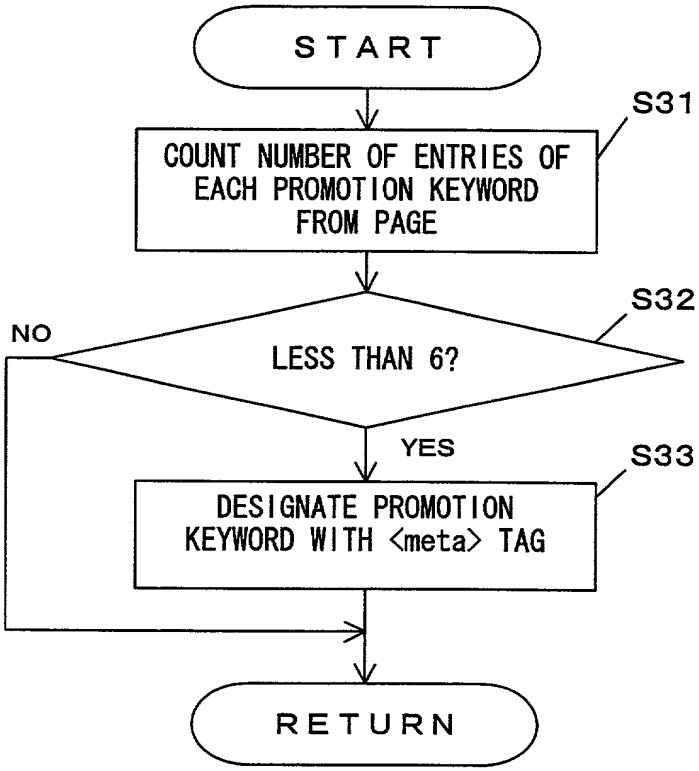
START
S31
COUNT NUMBER OF ENTRIES OF EACH PROMOTION KEYWORD FROM PAGE
S32
NO
LESS THAN 6?
YES
S33
DESIGNATE PROMOTION KEYWORD WITH <meta> TAG
RETURN

FIG. 10

(A) BEFORE TUNING PROCESS

```
<html>
<head><title>Congratulations!</title>
</head>
<body bgcolor=#ffcccc>
<center>
<h1>Congratulations!</h1>
<h3>YOU COULD SECCESSFULLY FIND THE PAGE IN THE UNIVERSE
OF THE INTERNET!</h3>
<h3>FILL IN THIS FORM AND GET NICE AWARD. </h3>
<img src=img1.gif>
<table border=2><tr><td>
<form  method=get
action=http://para.cab.infoweb.ne.jp/cgi-bin/oubo.cgi>
NAME<input type=text size=50><br>
ADDRESS<input type=text size=50><br>
TELEPHONE<input type=text size=50><br>
E-mail<input type=text size=50><br>
AWARD ENTRY KEYWORD<input type=text size=50><br>
<input type=submit value=SEND>
</form>
</td></tr></table>
</center>
</body>
</html>
```

(B) AFTER TUNING PROCESS

```
<html>
<head><title>Congratulations!</title>
<meta name=keywords content=RAW CHOCOLATE, RAW
CHOCOLATE, RAW CHOCOLATE, RAW CHOCOLATE, RAW CHOCOLATE,
RAW CHOCOLATE, RAW CHOCOLATE, RAW CHOCOLATE, RAW
CHOCOLATE, RAW COHCOLATE>
</head>
<body bgcolor=#ffcccc>
<center>
<h1>Congratulations!</h1>
<h3>YOU COULD SUCCESSFULLY FIND THE PAGE IN THE UNIVERSE
OF THE INTERNET!</h3>
<h3>FILL IN THIS FORM AND GET NICE AWARD.</h3>
<img src=img1.gif>
<table border=2><tr><td>
<form  method=get
action=http://para.cab.infoweb.ne.jp/cgi-bin/oubo.cgi>
NAME<input type=text size=50><br>
ADDRESS<input type=text size=50><br>
TELEPHONE<input type=text size=50><br>
E-mail<input type=text size=50><br>
AWARD ENTRY KEYWORD<input type=text size=50><br>
<input type=submit value=SEND>
</form>
</td></tr></table>
</center>
</body>
</html>
```

FIG. 11

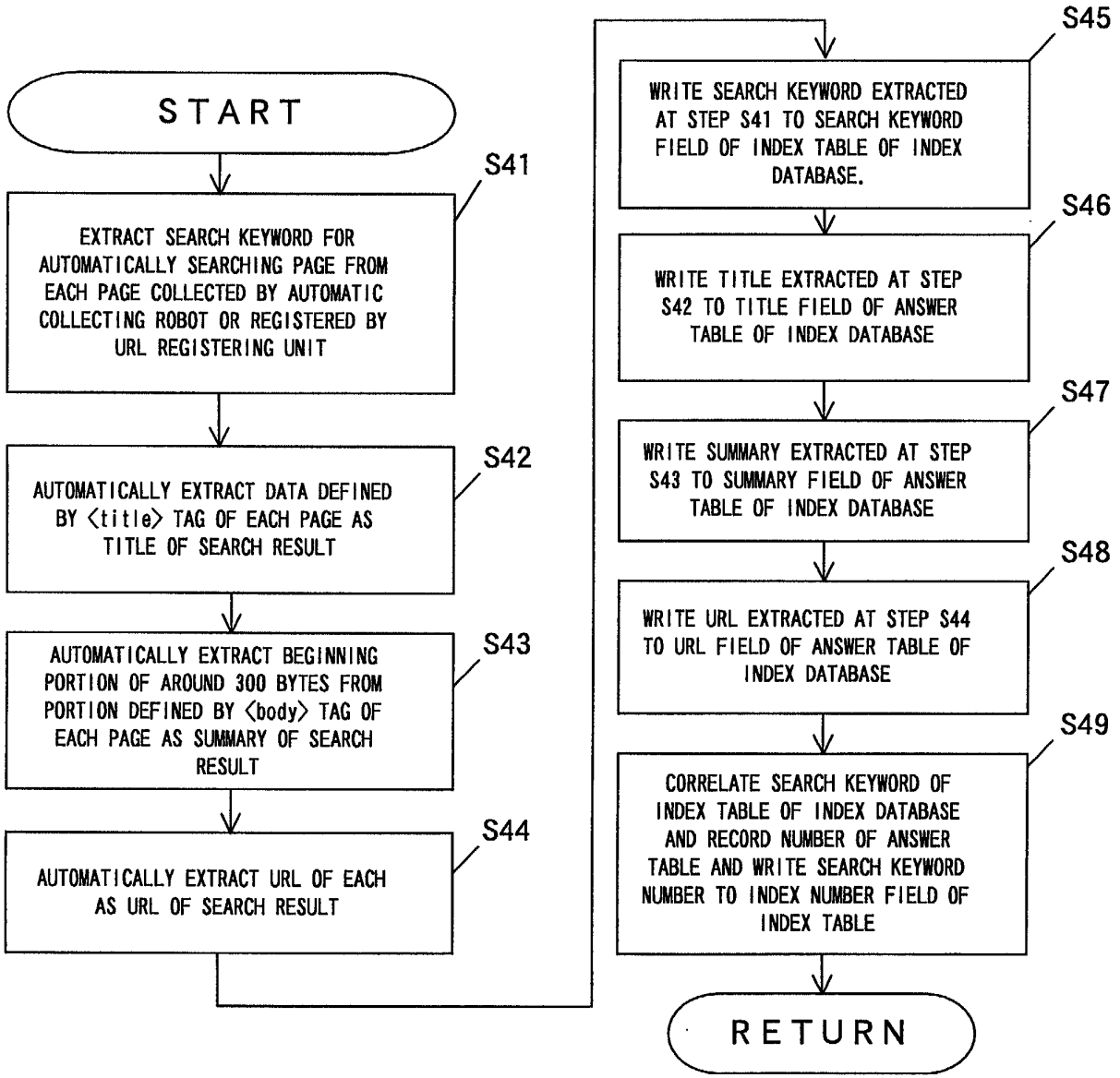
START
S41
EXTRACT SEARCH KEYWORD FOR AUTOMATICALLY SEARCHING PAGE FROM EACH PAGE COLLECTED BY AUTOMATIC COLLECTING ROBOT OR REGISTERED BY URL REGISTERING UNIT
S42
AUTOMATICALLY EXTRACT DATA DEFINED BY <title> TAG OF EACH PAGE AS TITLE OF SEARCH RESULT
S43
AUTOMATICALLY EXTRACT BEGINNING PORTION OF AROUND 300 BYTES FROM PORTION DEFINED BY <body> TAG OF EACH PAGE AS SUMMARY OF SEARCH RESULT
S44
AUTOMATICALLY EXTRACT URL OF EACH AS URL OF SEARCH RESULT
S45
WRITE SEARCH KEYWORD EXTRACTED AT STEP S41 TO SEARCH KEYWORD FIELD OF INDEX TABLE OF INDEX DATABASE.
S46
WRITE TITLE EXTRACTED AT STEP S42 TO TITLE FIELD OF ANSWER TABLE OF INDEX DATABASE
S47
WRITE SUMMARY EXTRACTED AT STEP S43 TO SUMMARY FIELD OF ANSWER TABLE OF INDEX DATABASE
S48
WRITE URL EXTRACTED AT STEP S44 TO URL FIELD OF ANSWER TABLE OF INDEX DATABASE
S49
CORRELATE SEARCH KEYWORD OF INDEX TABLE OF INDEX DATABASE AND RECORD NUMBER OF ANSWER TABLE AND WRITE SEARCH KEYWORD NUMBER TO INDEX NUMBER FIELD OF INDEX TABLE
RETURN

FIG. 12

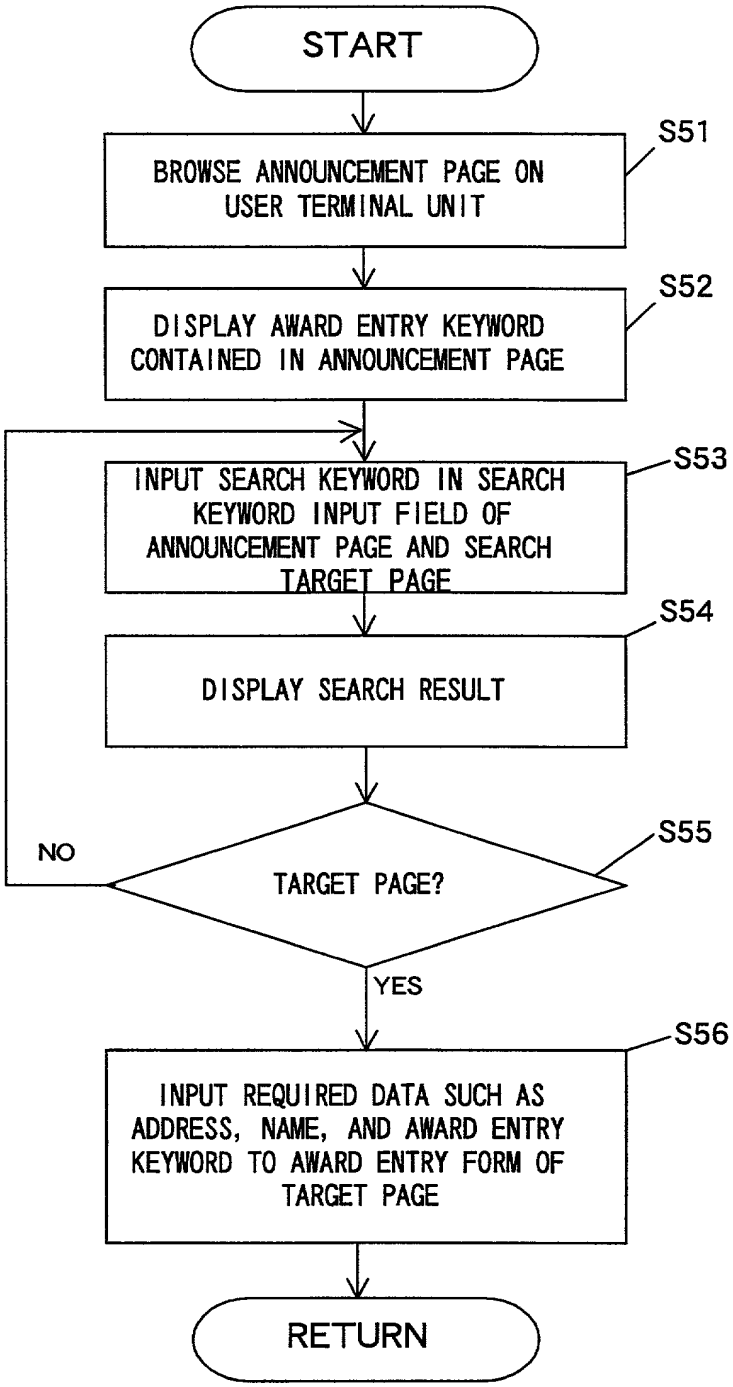
START
BROWSE ANNOUNCEMENT PAGE ON USER TERMINAL UNIT
S51
DISPLAY AWARD ENTRY KEYWORD CONTAINED IN ANNOUNCEMENT PAGE
S52
INPUT SEARCH KEYWORD IN SEARCH KEYWORD INPUT FIELD OF ANNOUNCEMENT PAGE AND SEARCH TARGET PAGE
S53
DISPLAY SEARCH RESULT
S54
TARGET PAGE?
S55
NO
YES
INPUT REQUIRED DATA SUCH AS ADDRESS, NAME, AND AWARD ENTRY KEYWORD TO AWARD ENTRY FORM OF TARGET PAGE
S56
RETURN

FIG. 13

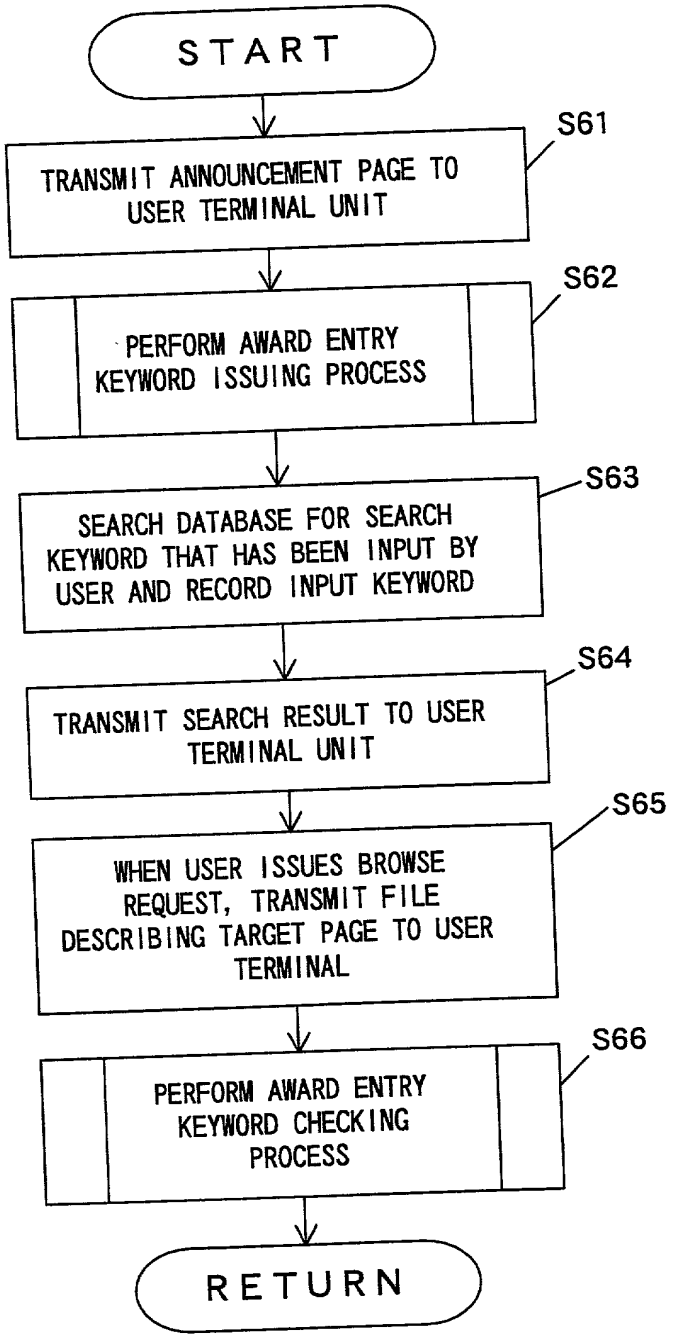
START
S61
TRANSMIT ANNOUNCEMENT PAGE TO USER TERMINAL UNIT
S62
PERFORM AWARD ENTRY KEYWORD ISSUING PROCESS
S63
SEARCH DATABASE FOR SEARCH KEYWORD THAT HAS BEEN INPUT BY USER AND RECORD INPUT KEYWORD
S64
TRANSMIT SEARCH RESULT TO USER TERMINAL UNIT
S65
WHEN USER ISSUES BROWSE REQUEST, TRANSMIT FILE DESCRIBING TARGET PAGE TO USER TERMINAL
S66
PERFORM AWARD ENTRY KEYWORD CHECKING PROCESS
RETURN

FIG. 14

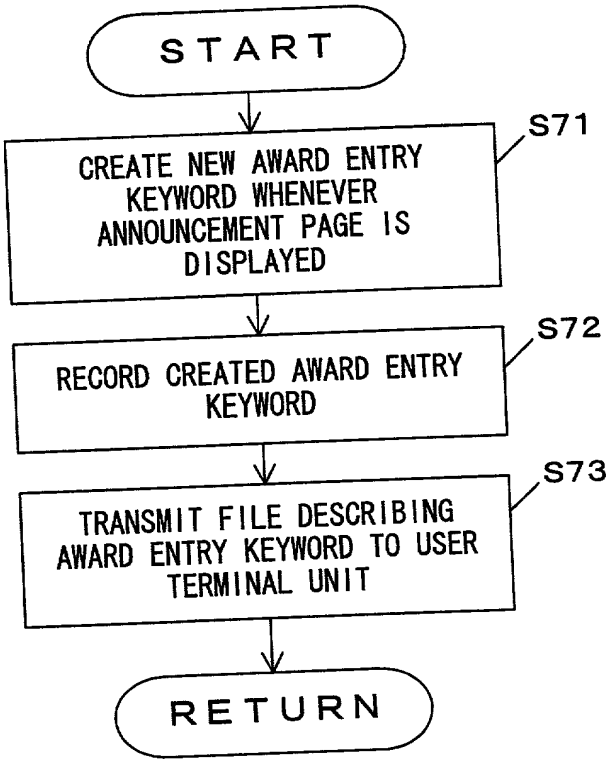
START
CREATE NEW AWARD ENTRY KEYWORD WHENEVER ANNOUNCEMENT PAGE IS DISPLAYED
S71
RECORD CREATED AWARD ENTRY KEYWORD
S72
TRANSMIT FILE DESCRIBING AWARD ENTRY KEYWORD TO USER TERMINAL UNIT
S73
RETURN

FIG. 15

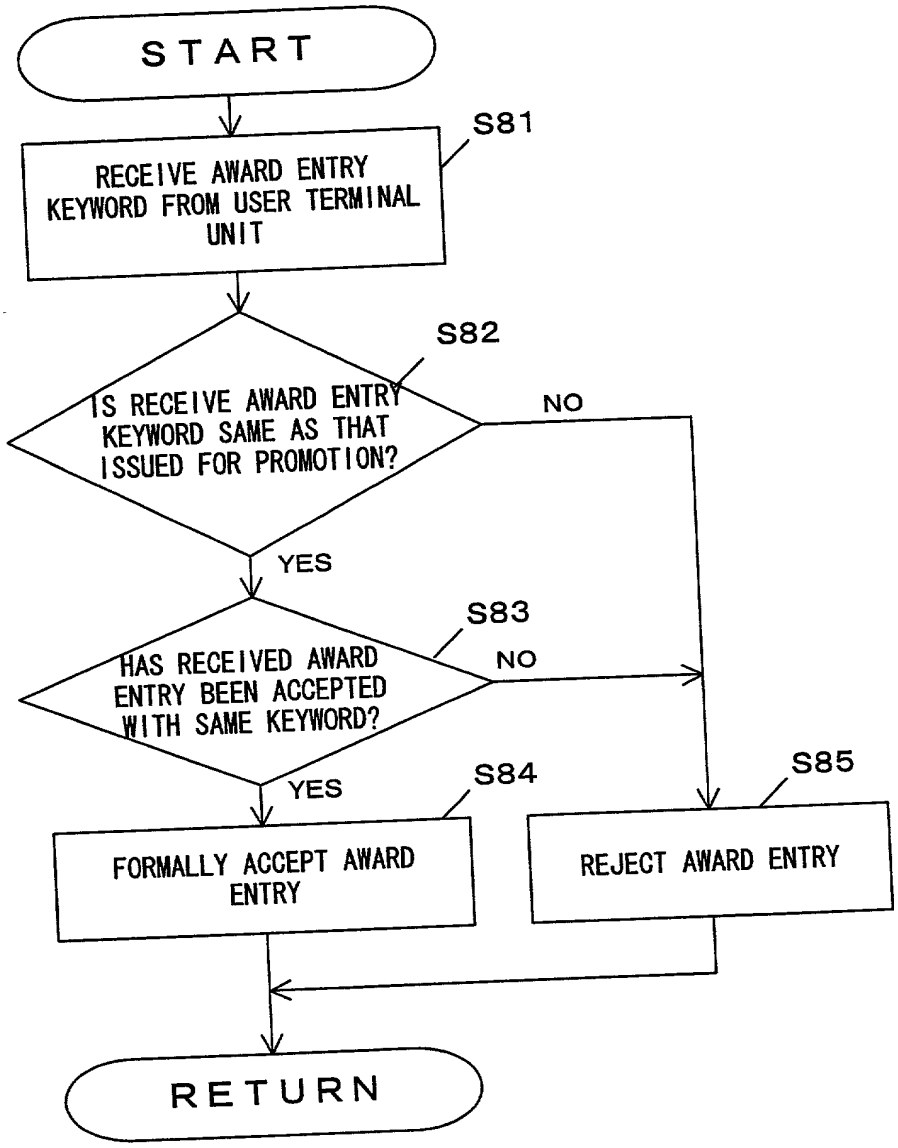
START
S81
RECEIVE AWARD ENTRY KEYWORD FROM USER TERMINAL UNIT
S82
IS RECEIVE AWARD ENTRY KEYWORD SAME AS THAT ISSUED FOR PROMOTION?
NO
YES
S83
HAS RECEIVED AWARD ENTRY BEEN ACCEPTED WITH SAME KEYWORD?
NO
YES
S84
FORMALLY ACCEPT AWARD ENTRY
S85
REJECT AWARD ENTRY
RETURN

FIG. 16

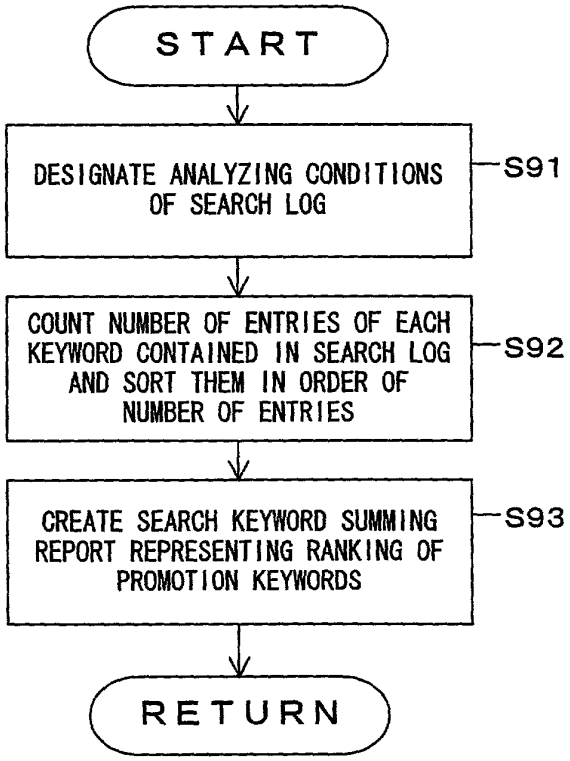
START
DESIGNATE ANALYZING CONDITIONS OF SEARCH LOG
S91
COUNT NUMBER OF ENTRIES OF EACH KEYWORD CONTAINED IN SEARCH LOG AND SORT THEM IN ORDER OF NUMBER OF ENTRIES
S92
CREATE SEARCH KEYWORD SUMMING REPORT REPRESENTING RANKING OF PROMOTION KEYWORDS
S93
RETURN

FIG. 17

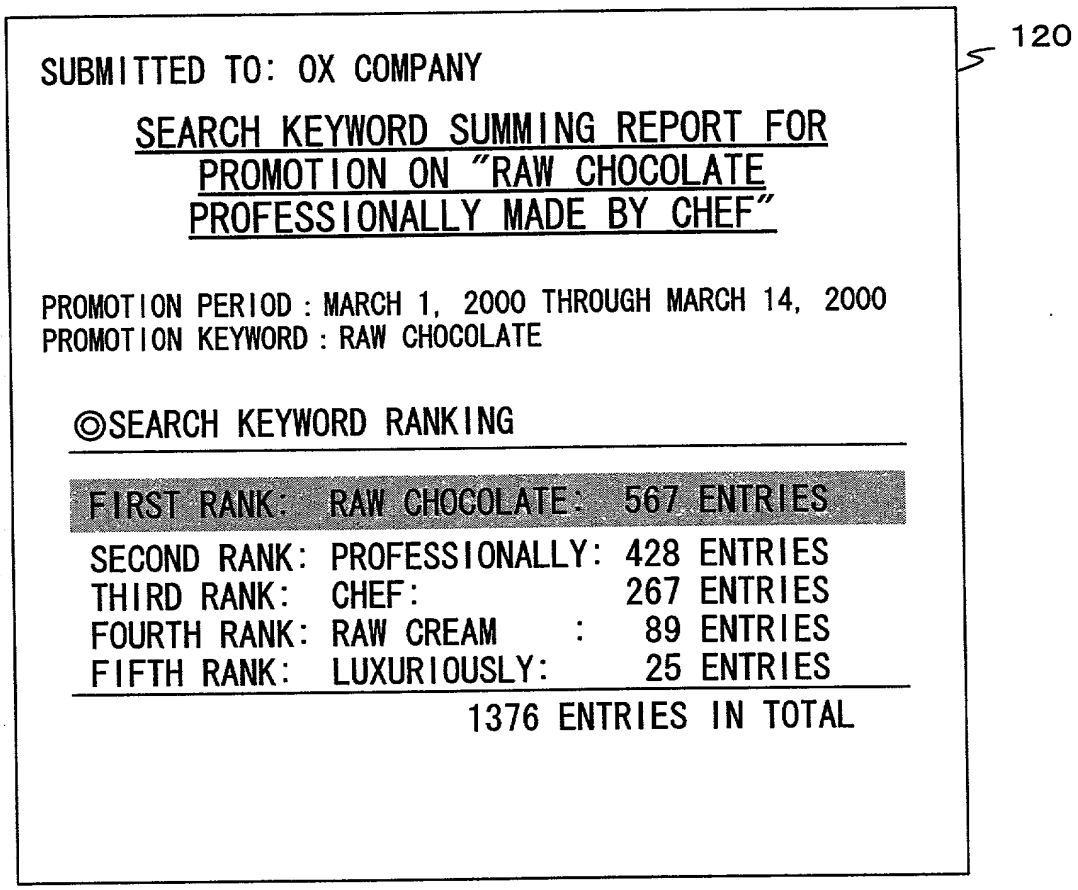
120
SUBMITTED TO: OX COMPANY
SEARCH KEYWORD SUMMING REPORT FOR PROMOTION ON "RAW CHOCOLATE PROFESSIONALLY MADE BY CHEF"
PROMOTION PERIOD : MARCH 1, 2000 THROUGH MARCH 14, 2000
PROMOTION KEYWORD : RAW CHOCOLATE
◎SEARCH KEYWORD RANKING
FIRST RANK: RAW CHOCOLATE: 567 ENTRIES
SECOND RANK: PROFESSIONALLY: 428 ENTRIES
THIRD RANK: CHEF: 267 ENTRIES
FOURTH RANK: RAW CREAM : 89 ENTRIES
FIFTH RANK: LUXURIOUSLY: 25 ENTRIES
1376 ENTRIES IN TOTAL

FIG. 18

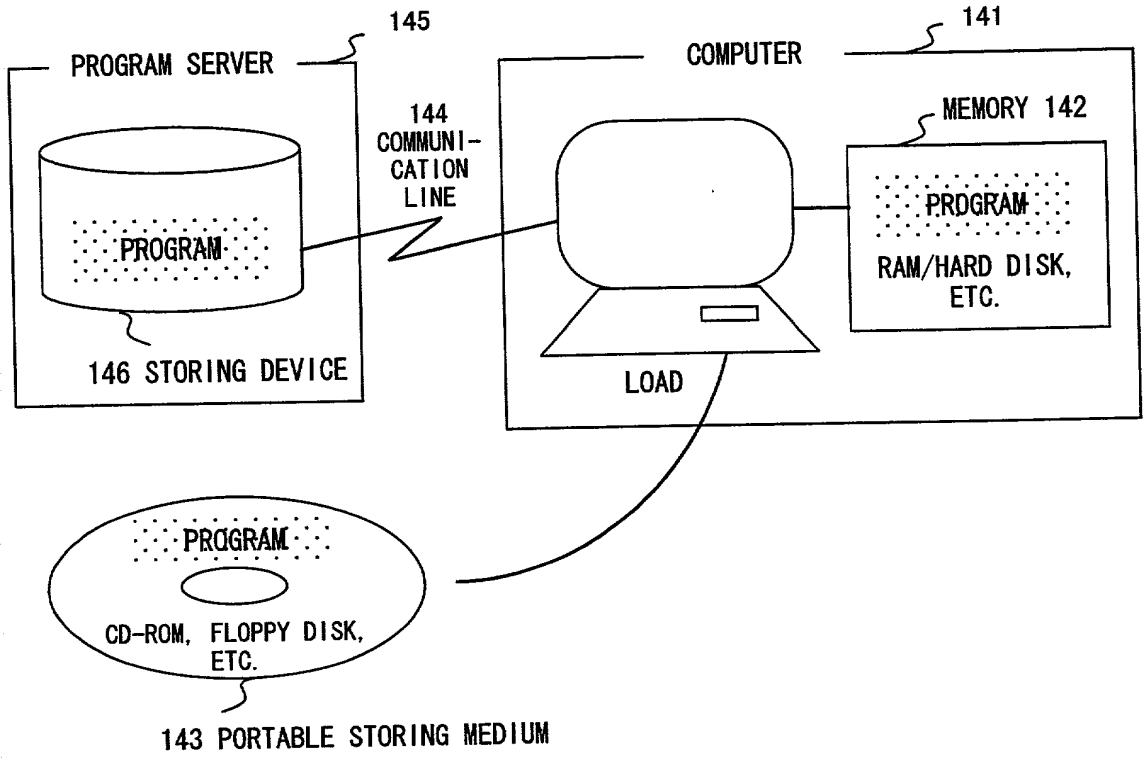
145
PROGRAM SERVER
PROGRAM
146 STORING DEVICE
144
COMMUNI-
CATION
LINE
141
COMPUTER
MEMORY 142
PROGRAM
RAM/HARD DISK,
ETC.
LOAD
PROGRAM
CD-ROM, FLOPPY DISK,
ETC.
143 PORTABLE STORING MEDIUM

FIG. 19